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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/645,627	08/22/2003	Yasuo Kurusu	50072-022	8025

7590 06/23/2006  
McDermott, Will & Emery  
600 13th Street, N.W.  
Washington, DC 20005-3096

EXAMINER
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NGUYEN, TUAN N

ART UNIT	PAPER NUMBER
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2828

DATE MAILED: 06/23/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

**Office Action Summary**

Application No.

10/645,627

Applicant(s)

KURUSU, YASUO

Examiner

Tuan N. Nguyen

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 21 April 2006.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-8 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-8 is/are rejected.
- 7) ☒ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 22 August 2003 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some \* c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)  | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)   | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)             |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date <u>12/31/03; 4/22/05</u> . | 6) <input type="checkbox"/> Other: _____  |

## DETAILED ACTION

### Claim Rejections - 35 USC § 102

1. The following is a quotation of 35 U.S.C. 102(b) which forms the basis for all obviousness rejections set forth in this Office action:

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

2. Claims 1, 2 are rejected under 35 U.S.C. 102(a) as being unpatentable over Glance et al. (US 5907569).

With respect to claim 1, Glance et al. '569 discloses and shows a light emitting device drive circuit for driving a light emitting device in accordance with an input signal (*Title/ABSTRACT*), the circuit comprising: a current source for generating constant currents each being supplied to the light emitting device either in a light emitting state or an extinction state in accordance with an input signal; the light emitting device to which a current is supplied by the current source (*Fig 1: laser/LED 103, driven by current source  $I_s$ , either in emitting or extinct state*); and a resistor connected in parallel with the light emitting device, wherein the light emitting device emits light and quenches light emission in accordance with a drive current which is a subtraction of a current supplied to the resistor from the current supplied by the current source (*Fig 1: 101, 102, 103  $I_s$ ,  $I_{Mod}$   $I_R$ ,  $I_B$ , LED where resistor connected in parallel with LED  $R(T)$  wherein led emits/quenches light in accordance with drive current source and to resistor*).

With respect to claim 2, Glance et al. '569 discloses wherein a value of the resistor is set so as to increase the drive current supplied to the light emitting device when a forward voltage of the light emitting device is decreased in connection with a temperature rise due to light emission,

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the drive current being increased by an amount of a current for compensating for an intensity of the light from the light emitting device which is decreased due to the decrease of the forward voltage (*ABSTRACT*)(Fig 1, 3:  $R(t)$ ,  $R3(t)$ ) (Col 1: 45-67 where bias current through a value of the resistor compensate the LED in connection with temperature rise).

### ***Claim Rejections - 35 USC § 103***

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
  2. Ascertaining the differences between the prior art and the claims at issue.
  3. Resolving the level of ordinary skill in the pertinent art.
  4. Considering objective evidence present in the application indicating obviousness or non-obviousness.
4. Claims 3-7 are rejected under 35 U.S.C. 103(a) as being unpatentable over Glance et al. (US 5907569) in view of Forsberg (US 6049175).

With respect to claims 3, 6 Glance et al. '569 discloses and shows a light emitting device drive circuit for driving a light emitting device in accordance with an input signal, the circuit (*Title/ ABSTRACT*) comprising: a current source for generating constant currents each being

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supplied to the light emitting device either in a light emitting state or an extinction state in accordance with an input signal (*Fig 1: laser/LED 103, driven by current source  $I_s$ , either in emitting or extinct state*); the light emitting device to which a current is supplied by the current source (*Fig 1:  $I_B$  led current from current source  $I_s$  and  $I_{mod}$* ); The claim further requires a connect to one end of an anode and a resistor connected between the other end of the coil and a cathode of the light emitting device. Glance et al. '569 shows the coil inductor connected to the anode of the LED or the resistor is, however does not discretely teach the coil inductor connect to anode and the resistor connect to the cathode of the led. Forsberg '175 shows and discloses a LED device arrangement for peaking the current upon switching ON/OFF having the inductor coil L and resistor R to increase the response period and emission of the LED can be constant (*Fig 1: 3 R and L parallel with LED*) (*Col 1: 40-67*)(*Col 3-4*) so that the light emitting device emits light and quenches light emission in accordance with a drive current which is a subtraction of a current supplied to the resistor from the current supplied by the current source (*Fig 1: 101, 102, 103  $I_s$ ,  $I_{Mod}$   $I_R$ ,  $I_B$ , LED where resistor connected in parallel with LED  $R(T)$  wherein led emits/quenches light in accordance with drive current source and to resistor*). It would have been obvious to one of ordinary skill in the art to provide Glance et al. '569 with the inductance and resistance parallel to LED as taught or suggested by Forsberg '175, for the benefit of increase switching and emission of the LED can be constant. It has been held that where the general conditions of a claim are disclosed in the prior art, disclosing the optimum or workable ranges involves only routine skill in the art, in this case the inductor coil is connected to the anode and resistor connected to the cathode or vice versa. (this also was admitted by the applicant's application section [0022]).

With respect to claims 45, 7,8 the claim further requires wherein values of the coil and the resistor are set so as to increase the drive current supplied to the light emitting device during a rising response delay period in a transition from OFF to ON state, when the drive current being increased by an amount for shortening the rising response delay period, or the drive current being increased by an amount of a current for compensating for an intensity of the light from the light emitting device which is decreased due to the decrease of the forward voltage in connection with a temperature rise when emitting. It has been held where the general conditions of a claim are disclosed in the prior art, disclosing the optimum or workable ranges involves only routine skill in the art.

***Communication Information***

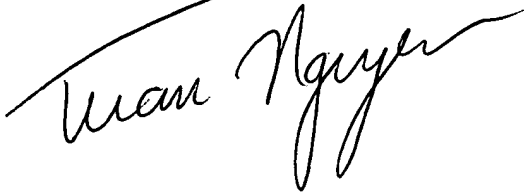
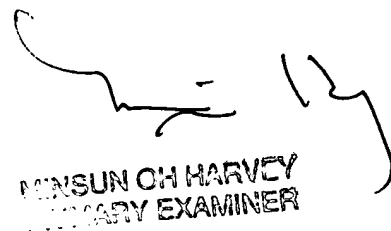
Any inquiry concerning this communication or earlier communications from the examiner should be directed to Tuan N Nguyen whose telephone number is (571) 272-1948. The examiner can normally be reached on M-F: 7:30 - 4:30PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Harvey Minsun can be reached on (571) 272-1835. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Tuan N. Nguyen

A handwritten signature in black ink, appearing to read "Tuan Nguyen", with a long horizontal flourish extending to the left.A handwritten signature in black ink, appearing to read "Minsun Oh Harvey", with a long horizontal flourish extending to the right.  
MIN SUN OH HARVEY  
PATENT EXAMINER